**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Developing a RDMS, p 113-119**

**In creating the database the following is carried out:**

* Creating the tables and relationships
* Setting up the queries
* Input forms
* Creating macros

**TESTING THE SOLUTION, P 115**

1. **Why is testing carried out?**

Testing is carried out to ensure that all features and functions of the solution work correctly and that the information is free of errors.

1. **Distinguish between informal and formal testing.**

Formal testing involves testing the overall solution after it has been completed. This type of testing is formalised with comprehensive documentation of each test and its outcome. Informal testing occurs during the development stage. As you create the solution, you should be constantly testing to see if the solution behaves according to expectations.

1. **Formal testing:**
2. **Bench Test**

A bench test is a part of formal testing and involves sample data being used to determine how the solution behaves.

1. **What does a bench test entail?**

A bench test involves data being chosen to see whether calculations are preformed correctly and data with errors is handled with validation techniques. A test plan created during design phase is used and results of the testing are written on printouts of the solution

1. **Describe User acceptance testing.**

User acceptance testing involves asking users to follow a series of steps to complete a task in the solution or to interpret the information contained in the output, then provide feedback to the developers.

1. **Testing validation**

This is the first key feature to test in the solution. Testing the data here ensures that the data is correct before it is entered via forms or queries are run.

1. **Testing should test the boundaries of the validation rule. What does this mean?**

It is important to test the data within the range and outside and also the data type. This makes sure that there are no flaws in the validation rule. For example if the range was from 100 to 500 and the data type was number you would test the data 99, 100, 300, 500, 501 and then try and enter any text such as the letter ‘f’.

1. **Testing the query**

Queries need to be tested to make sure they work correctly once you have created a set of data, manually check the test data to identify the records that meet the criteria specified in the query. The test data must make sure that the records returned meet the first criterion. If there are formulas in the solution these also need to be tested.

1. **Testing formulas**

Regardless of the location of the formulas, each one needs to be tested. Appropriate test data must be chosen in order to determine whether or not the formulas are accurate.

1. **During which stage of the PSM does testing take place?**

Testing takes place in the development stage of the PSM.

1. **Why is testing performed during this stage?**

Testing is preformed in this stage to ensure that before the solution is evaluated it has been fully tested and is fully functional when the evaluation takes place. This allows a more efficient evaluation of the whole solution because errors are not restricting the individual in evaluating the solution.